Tackling Sugar Reduction in Sugar Confections

A toolbox approach using functional solutions can help confectioners reach desired levels of sugar and calorie reduction while maintaining optimal product texture and consumer eating experience.

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One of the biggest challenges for the sugar confection category is increased priority and focus on consumer health. Confections traditionally contain higher levels of sugar, which means consumers may eat less of their favorite candy products in order to meet individual lifestyle goals or better manage their weight. Reducing sugar in these products can play a role in providing healthier options for consumers while helping combat public health issues such as obesity and Type II diabetes.

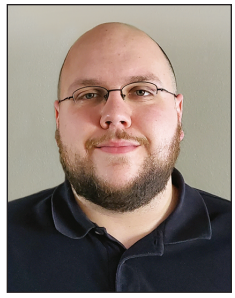
To understand how to reduce sugar and calories in gelled confections, it is important to first review the functionality of the ingredients that deliver sweetness and texture to these products. Jelly candies and gummies are categorized as gelled confections, and are stabilized using a single or combination of hydrocolloids such as gelatin, pectin, starch, carrageenan, gellan gum and agar gum. Hydrocolloids are key ingredients in this category of confections for delivering texture as they gel, thicken, and provide adhesive and cohesive properties to the bulk sweetener solids matrix while inhibiting sucrose crystallization.

Proper selection of hydrocolloids has a significant impact on the final texture of a gelled confection. The strength of the gel depends on the amount of gelling agent in the product as well as functionality of the sweetener solids used in the formulation. In traditional gelled confections, the type of corn syrup used, often described by its dextrose equivalence (DE), and the corn syrup/sucrose ratio are important factors that contribute to firmness and chewiness of finished products.

BUILDING BLOCKS OF JELLY CANDIES AND GUMMIES

Jelly candies and gummies consist of sweetener solids, gelling agents and any secondary ingredients such as color, acid and flavor. They are generally deposited in starch and dried for 24 to 48 hours to achieve a specific moisture content.

Sweetener solids provide sweetness, bulk, shelf stability (reduction in water activity) and contribute to final texture. Formulation considerations for bulking and sweetener selection can be seen in Figure 1. Examples of sweetener solids include sucrose, corn syrup, high-fructose corn syrup, fructose, fruit juice concentrates and more. ➤



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